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ABSTRACT

The newsletter presents short vignettes describing persons of different ages and disabilities, with emphasis on the technologies each person uses to cope with daily challenges. Vignettes describe a Down Syndrome 6-year-old whose learning is helped by computer access; a cerebral palsied adult whose head-controlled power wheelchair, dowel stick, electric feeder, and telephone speakerphone give him a degree of independence; an older deaf adult for whom lights, a telecommunication device, and a television decoder provide important links with other people; a high school student with severe hearing loss who is able to attend regular classes due to his hearing aid and auditory trainer; a blind adult who makes maximum use of a computer with speech synthesizer and a Braillewriter; and a physically disabled adult who uses a wheelchair to increase mobility and uses computers for work and recreation. (DB)

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A Focus on Special People Using Technology...

May 1990

ARTIS
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Little Rock, AR 72204

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HINK PEOPLE... HINK TECHNOLOGY!

May, 1990

A publication representing a cooperative effort of the Technology Access for Arkansans (TAARK) Project and the Association for Retarded Citizens/Arkansas.

A Focus on Special People Using Technology...

Across Arkansas, persons with disabilities of all ages share a common vision--to be accepted as individuals with dignity who are capable of being productive and as independent of others as possible. Many of these persons are already making meaningful contributions to society, and living lives of greater independence due to technology. However, there are even more lives which have yet to be touched by the promise of technology, and the potential for a better quality of life that this promise brings with it.

All persons use technology. Any device or service which can improve the quality of life for people technology might be defined as technology; thus, it covers the entire range of human inventions from simple spoons for feeding, to wheelchairs, to complex computer systems which control our living environments. Persons with disabilities are often unaware of, or not provided with available technology which can improve their lives.

Artwork reprinted with permission of the artist, Martha Perske, from *Circles of Friends*, by Robert Perske. Nashville: Abingdon Press, 1988, p. 11.

The title of this publication, "Think People...Think Technology," suggests that we change our way of thinking about persons with disabilities. The needs of people should always come first, with technology providing the means to meet special needs of persons with disabilities.

This publication features a few of the many thousands of persons with disabilities in Arkansas who use technology in their daily lives. The stories that follow come from those who are using technology, not from the observations of others who work with persons with disabilities.

In this publication, short stories are presented of persons of different ages and with differing disabilities. Information has been provided directly by these persons (and by parents in one instance) about their needs and challenges which are faced in their daily lives. Technologies used to meet life's challenges are described by each person. Though there are differences in the types of technology used, a common thread runs through all the stories--each reflects a recognition of the importance of technology in the lives of all persons in our society, and the promise that it brings.

TAARK Staff
ARC Staff

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"Computer technology will be an important avenue of learning for Paul Browning throughout his school years, and may also open doors to employment beyond that," noted his parents.

Paul is a 6-year-old student at Rightsell Elementary School in Little Rock. He was born with Down's syndrome complicated by a severe heart defect. He also experienced developmental setbacks due to several episodes of serious illness, including combinations of asthma and pneumonia that put him in the hospital during his younger years.

When Paul started kindergarten during the 1988-89 school year, he was mainstreamed into the regular classroom setting. But his parents had difficult decisions to make when it came time to place him the following school year. "He was keeping up with his age peers in some areas, but lagged far enough behind in others to give his IEP team concern about promoting him to the regular first grade classroom. His fine motor skills especially were not up to par." Somehow, it was felt that technology could assist educational programming efforts for Paul.

Since the Rockefeller open-classroom scheme did not meet Paul's needs, his IEP team developed a creative plan that involved placing him in a new school setting that gave him the first graders becoming accustomed to the forms of the more structured and academically rigorous demands of a graded curricula. "At the second semester, he began spending a half-day in first grade, and the transition next fall should be fairly smooth," his mother stated.

> ***"Information about what is available is really as important as the devices themselves."***

"A major factor in Paul's success in the mainstream is access to computers. Rockefeller was a computer specialty school, so he had a terminal in his classroom and also went to computer lab with his class once a week. This year, the kindergarten class works every day on 'Write to Read' software in the computer lab at Rightsell, and first grade will offer daily computer time too. For a youngster whose chronic disability entails poor speech and a slight hearing loss in both ears, the computer is a communication device that circumvents these weak areas and prompts cognitive learning through alternative means.

Paul's parents readily acknowledge the benefits of early experiences with technology. "Knowledge about what assistive devices exist, how they work, and how they may or may not fit into an individual's life and learning is critical to consumers and their families. Information about what is available is really as important as the devices themselves. 'Technology access' couldn't be more timely!"

"My wheelchair is the most important technology in my life" said Jessie Davis, a 31 year-old with severe cerebral palsy. For the past 4 years, Jessie has received services from United Cerebral Palsy (UCP) in Little Rock, and uses his wheelchair to go everywhere. "Without my wheelchair", he noted, "I would not be able to get to town, or go anywhere without being pushed by someone else." Jessie's wheelchair is a head-controlled, powered wheelchair, and it gives him the mobility he needs for greater independence in his life.

But this very mobility is also affected by the architectural barriers that he encounters every day of his life as he strives to be less dependent on others. "Our state needs to give more thought to making buildings accessible to people with disabilities. You wouldn't believe the problems I have getting around in town. All buildings should be accessible to persons in wheelchairs, and people need to be more aware of the standards for building accessibility." Jessie noted that buildings need more ramps, rather than stairs--a frequently voiced concern of persons with disabilities in Arkansas.

Jessie uses other technologies in his daily life activities, including such simple technology as a dowel stick to more advanced technologies such as an electric feeder and telephone speakerphone. "Sometimes people don't realize how important the simple technologies are," Jessie pointed out. "I use a dowel stick to open and lock doors in the house, to open and close cabinet and refrigerator doors, and to use the telephone and computer keyboard."

"Our state needs to give more thought to making buildings accessible to persons in wheelchairs."

Jessie said that he had worked as a telephone receptionist for 3 years while residing at the Development Center in Conway. On moving to Little Rock, he completed prevocational and vocational training programs at UCP, and presently lives in an independent living setting.

Jessie feels that he can make a meaningful contribution in the labor force if given the opportunity. In fact, he pointed out that employers in Arkansas are very resistive to giving persons with disabilities a chance to use their potential. Currently, Jessie strives to find his niche in society, but says that it is difficult at best to be accepted as an equal in the labor force, an observation that is troubling in light of the many work-related technologies that have been developed for use by persons with disabilities. "I never give up trying," Jessie noted, "and it is this message that I would like to share with others--never give up. Technology is there, and opportunities are there. We just have to find the right persons who are willing to give us a chance."

calls for us which was demeaning in a way since some of the calls were of a personal nature. We had to leave doors open if we expected callers—in fact, our doors were almost always open during the day." And when our daughter was born, we had to depend on "mother's instinct" to know when she woke up during the night."

"Some of the most basic technologies like smoke alarms were unheard of," Charlotte noted. "We did have alarm clocks which lit up at the set time, but they were mostly the Rube Goldberg types which the deaf people put together themselves."

But as technology and its availability have changed, so has the quality of life for Charlotte and her family. "Today our lives are governed by lights—lights which alert us if someone is at the door, if the phone is ringing, if there is a fire in the house, to wake us up, and to let us know if a baby or some other person is crying out. My husband was seriously ill for five months and I used to signal during the night to attend to his needs when he pushed a button. My decoder gives me hours of pleasure to watch programs that I can choose, and with my VCR there are recent releases of movies that I can watch with the captions."

"Our state has not yet joined the many other states that provide free telecommunication devices for the deaf (TDDs) to the deaf population. Our relay system is still undergoing growing pains and there is room for improvement in that area. There should be more public information about the wonderful assistive devices available to the deaf and hard of hearing community."

Perhaps the greatest hope for the future of technology for all persons with deafness was clearly summed up in Charlotte's observation that "there is the 'impossible dream' of a robot interpreter being invented someday to solve the ever-growing problem of not having enough human interpreters."

"There should be more public information about the wonderful assistive devices available."

"My hearing is distorted due to nerve damage that can't be repaired," says Ekron Bufford, a 10th grade student at Central High School in Little Rock. Using an auditory trainer to compensate for a severe hearing loss, Ekron is able to successfully participate in regular school activities with his peers.

He has used a hearing aid since he was 4 years of age. "I'm doing the best I can with my hearing aid so I don't have to go to a school for deaf persons and have to rely on sign language. Without the hearing aid, I would miss a lot--especially things people say that can't be communicated with sign language." Ekron described some of the subtle characteristics of language that he would not be able to enjoy without the use of his auditory trainer and hearing aid. "Sign language won't let you hear a person's voice--things like the loudness or softness tell us thow people feel about things. With sign you miss out on a lot of feelings," he noted.

Ekron was quick to point out that the repair time required for some types of technology was detrimental to the persons using technology. "If I have to get my auditory trainer repaired, it can take almost 3 months to send it to California and have it repaired. Do you realize how many school learning experiences I would miss in that time?" He suggested that if there were places locally where technology could be repaired, it would be quite helpful to many persons with hearing problems.

Ekron noted several concerns regarding technology. Design is one major source of concern. "Sometimes I get a headache listening to all the background noises that come in on my auditory trainer. It makes things louder, but it also amplifies all the other noises." The high cost of purchasing technology was another concern that he reported, stating that his auditory trainer costs about $2,000. "If it were not for the Arkansas Association for Hearing Impaired Children, I might not have my auditory trainer today. My trainer was a gift from them. I don't know how other people who might be helped are able to pay for it."

"Someone said that if you believe, you can achieve. Technology has helped me to believe in myself."

The promise of technology was clearly reflected in Ekron's outlook on life. "Sometimes people say that just because someone is hard of hearing, they're going to have a hard time. I say that is true, but it doesn't have to hold you back. Someone said that if you believe, you can achieve. Technology has helped me to believe in myself. My teachers have told me that they've had people with hearing problems in their classes before, but none of them have accomplished what I have with my technology."

An employee of the Division of Services for the Blind in Little Rock, Larry Wayland is no stranger to technologies which are changing the lives of persons with blindness in Arkansas. The loss of sight has in no way inhibited Larry from accessing and retrieving information in the work environment.

"I use the computer for notetaking, storage, and retrieval of information. I also use a Perkins Braillewriter which is important for me to use in jotting down phone numbers and for notetaking. Basically, I use computers for permanent storage purposes, while the Braillewriter is used for temporary information storage. The computer enables me to get information by calling the CompuServe computer that has the handicapped users database, where I get new information about equipment as a part of my job description. My computer with the speech synthesizer is my most important technology. It allows me to write and proofread independently."

"Even at home, I use the computer. It's a hobby of sorts with me. For example, I call NASA regularly to get information about space age technologies, particularly the probes which are in space. I find this interesting because the technology applications used in the space industry may somehow help me in the future."

Aside from his computer, Larry uses other types of technology for independent living activities less frequently. Larry noted, for example, that he used Braille lettering on his microwave oven, allowing him to know which buttons to press when preparing meals.

From an advocacy perspective, Larry said that the state should pay close attention to computer equipment that is accessible to blind persons. Graphics-based programs are difficult to access, he said, suggesting that either Braille display, large print, or speech synthesis technology is needed with such programs.

"We need to work on making machines more accessible. I think that state agencies are using accessible software packages that incorporate Braille display with synthesized speech and large print. I feel strongly that people with blindness need to join together and let their needs be known about the computer situation in the state. Blind people need to know that computers will make more information accessible to them.. In the past, written information was not available; now we have optical scanners and other types of technology that are making this information more accessible. It's expensive, but people need to know that it is available."

"We need to work on making machines more accessible."

"Just about everything I do is influenced by technology," notes Burton D. Pusch, an administrator in the field of Independent Living. " I want it to make me a part of the mainstream of life, rather than separate me from it. Technology is best when it improves the quality of our lives without being distinguished as 'technology'. Therefore, it is important to me that the technology I use not make me stand out as stand out as 'special' or 'different' or 'handicapped'. I have a disability, but I am not disabled."

The difficulties or ease with which his goals in life have been attained, however, have not been due to his physical difference, but rather due to the attitudes of others and the environment. "The environment that I live in allows me to continually express my abilities. The real issue here is not what technology has 'overcome' in my life, but rather, the fact that technology has enhanced and improved the quality of my life, just like it has done in the lives of billions of people all over the world. The only difference is that I use technology in ways that are different from a majority of the population. I use technology not because I am 'worse off' or deal with problems because I am a person with a disability. I use technology to improve my life because it is my life, regardless of the impact of the technology, that has value."

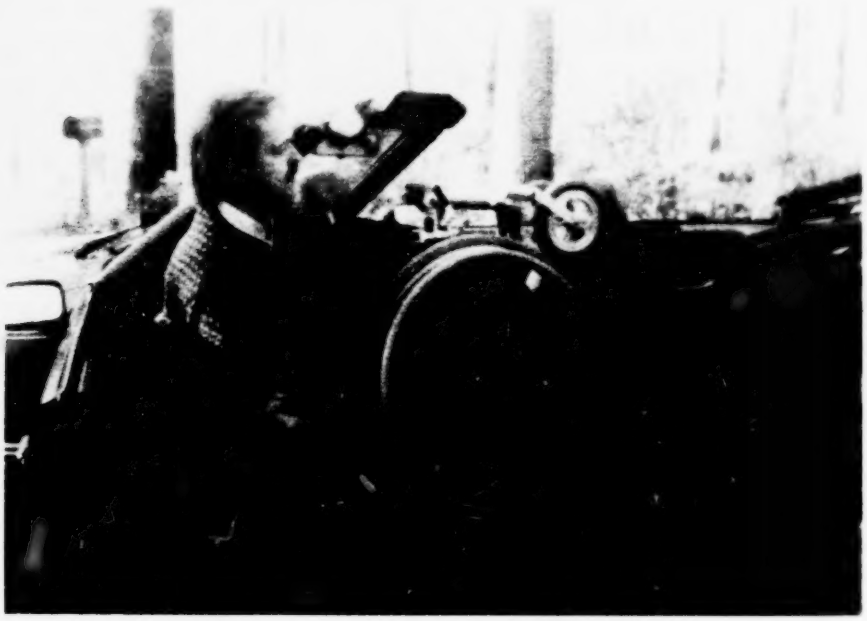
"Technology is becoming more affordable, more accessible, and more normalized."

"As a child I used technology to walk, when everyone thought that walking was better than riding. As an adult I discovered that wheelchairs were a better technology for getting from point 'A' to 'B'. I felt that for some people, walking is stupid. Just because a majority of people do it, doesn't mean it is best for everyone. For me, walking was exhausting and awkward."

Burton has also used a computer at home and at work since 1981. " Personally, I use a computer for entertainment, artwork, word processing and the management of my time and resources. Professionally, I use computer technology for word processing, project and data management, and information gathering and networking."

"As a motorist, my first three cars were all specially adapted. However, because of advances in technology which have resulted in new designs for environmental controls in vehicles, my present car did not have to specially modified".

Such changes have important implications suggested Burton. "One of the nice things about technology is that it is becoming more and more accepted as a part of everyone's life. What this means for persons with disabilities is that technology is becoming more affordable, more accessible, and more normalized".



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